

From wang!elf.wang.com!ucsd.edu!info-hams-relay Fri Apr 12 14:46:13 1991 remote
from tosspot
Received: by tosspot (1.64/waf)
via UUCP; Sat, 13 Apr 91 10:51:00 EST
for lee
Received: from somewhere by elf.wang.com
id aa28246; Fri, 12 Apr 91 14:46:12 GMT
Received: from ucsd.edu by relay1.UU.NET with SMTP
(5.61/UUNET-shadow-mx) id AA05127; Fri, 12 Apr 91 10:24:00 -0400
Received: by ucsd.edu; id AA03105
sendmail 5.64/UCSD-2.1-sun
Fri, 12 Apr 91 04:30:29 -0700 for nixbur!schroeder.pad
Received: by ucsd.edu; id AA03099
sendmail 5.64/UCSD-2.1-sun
Fri, 12 Apr 91 04:30:26 -0700 for /usr/lib/sendmail -oc -odb -oQ/var/spool/
lqueue -oi -finfo-hams-relay info-hams-list
Message-Id: <9104121130.AA03099@ucsd.edu>
Date: Fri, 12 Apr 91 04:30:24 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams-relay@ucsd.edu>
Reply-To: Info-Hams@ucsd.edu
Subject: Info-Hams Digest V91 #290
To: Info-Hams@ucsd.edu

Info-Hams Digest Fri, 12 Apr 91 Volume 91 : Issue 290

Today's Topics:

(none)
2m thru-glass ant question
50 to 75 ohm transformer??? (2 msgs)
Alinco 560 -- any comments?
Amateur activity in the National Parks (Yellowstone)
apt freqs.
ATV AM/FM revisited
Base antennas for 2m/70cm
FM-10
License & VEC
QSO with shuttle
request for info on IC-W2 handie
sattelite tracking
TRF Receiver
TUCKER IS SOLD OUT ON THE SINGER SPECTRUM ANALYZER

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available

(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: 11 Apr 91 15:30:38 GMT
From: amdcad!dvorak.amd.com!mozart!reed@sun.com
Subject: (none)
To: info-hams@ucsd.edu

In article <9104101232.AA28493@ucsd.edu> BUSH@s51.PRime.COM writes:

>
>What is heard is a drifting, AC modulated (3 phase x 60 Hz.) signal.
>This "signal" can be easily detected as it drifts by any one frequency
>in the AM, SSB or CW mode. It has a very unstable, parisitic sound
>characteristic and repeats its course in frequency travel every 10 or
>20 seconds. As I said, it can be easily heard when the band is open
>from its origin skip zone AND is typically limited to weekdays! I can't
>remember a time that it was present (even when the band is open) on a
>holiday or on weekends! I have worked with dielectric sealers in years
>past and strongly feel that this is our 10 Meter band invader from
>industry! These machines can run many KW and normally operate just below
>28 Mhz. The FCC provides regulations limiting their radiation and
>obviously this one, or these, have run amuck.
>

I have run across exactly this sound, on 10 meters, and once traced it to a match factory's RF oven for drying the match heads out. As a result, I suspect ther is a lot of industrial stuff that can do it; do not limit the search to one kind of item.

Brings up another point; we have "foxhunts" locally on 2m; some hf experience foxhunting might help - maybe someone familiar with groups that do that could point them in the right direction...

cheers

--

"...just my opinion, not speaking for AMD." KK5D, 7J1AG0, XE1ZDR
David F. Reed 4512 Clarno Austin TX 78749
packet: KK5D@KB5PM driving by? try 442.150 repeater

Date: 10 Apr 91 23:58:18 GMT

From: hpl-opus!hpnmdla!alanb@hplabs.hpl.hp.com
Subject: 2m thru-glass ant question
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, jgd@Dixie.Com (John G. DeArmond) writes:

>This is not true. The thru-the-glass antenna is a half-wave and is
>voltage fed through the capacitance of the foot and the coupling box.
>The only time there are shield currents present is when the match box
>is misadjusted. One should follow the instructions and ground the box
>for the purpose of making tuneup easier. After that, the ground is
>superfluous.

It is not true that a half-wave end-fed antenna requires no ground/
counterpoise. In order for the coax not to radiate, the current into
the antenna must be equal and opposite to the current into the
counterpoise. If they are different, the difference flows in the coax
shield.

It is true that a half-wave end-fed antenna has much less feed current
than a quarter wave, but it is not zero. A good ground may be easier to
get with the half-wave antenna, but you still can't do away with it
entirely. Otherwise the coax acts like an end-fed random wire.

AL N1AL

Date: 11 Apr 91 20:51:01 GMT
From: usc!wuarchive!sdd.hp.com!hp-col!hpctdlb!drn@ucsd.edu
Subject: 50 to 75 ohm transformer???
To: info-hams@ucsd.edu

Joe,

There was a good article in either Ham Radio or 73 about a year ago that
gave a good design for matching transformers for 75 ohm cable hardline. It
was directed at VHF/UHF usage. I will get you the exact information and E-mail
it to you.

Dave Novotny
WA6IFI

Date: 11 Apr 91 20:48:01 GMT
From: usc!sdd.hp.com!hp-col!hpctdlb!drn@ucsd.edu
Subject: 50 to 75 ohm transformer???

To: info-hams@ucsd.edu

/ hpctdlb:rec.radio.amateur.misc / joseph@panix.uucp (Joseph R. Skoler) / 2:00 pm
Apr 10, 1991

I have at my disposal 3/4 inch hardline (about 2000 feet of it) and would love to put it to good use. The problem is, it's 75 ohm stuff.

So, my question is: Are matching transformers made which match 50 to 75 ohms and can handle substantial power (100 watts) at UHF frequencies?

If someone would point me in the right direction to solve this problem I'd be thankful.

Joseph R. Skoler

UUCP: cmcl2!panix!joseph
BITNET: skohc@cunyvms.bitnet
INTERNET: ak526@cleveland.freenet.edu
AMPR NET: kc2yu@kc2yu.ampr.org [44.68.32.56]
PBBS: kc2yu@nn2z.nj.usa.na

Date: 10 Apr 91 14:35:17 GMT
From: swrinde!elroy.jpl.nasa.gov!mip13!tcg060@ucsd.edu
Subject: Alinco 560 -- any comments?
To: info-hams@ucsd.edu

Anyone using an Alinco 560 HT? I am seeking comments on it, good or bad.
Thanks!

--
Tom Greer -- KC6TML

Date: 11 Apr 91 16:31:42 GMT
From: swrinde!cs.utexas.edu!execu!sequoia!uudell!pmafire!@ucsd.edu
Subject: Amateur activity in the National Parks (Yellowstone)
To: info-hams@ucsd.edu

In article <1991Apr10.192951.22228@aero.org> obrien@Aero.org (Michael O'Brien) writes:

>I'm headed for Yellowstone later on this summer. I was wondering what
>sort of activity I should be listening for. Of course there's HF,

>if I care to search out a hilltop. But I was wondering about VHF and
>UHF as well. Are there any amateur repeaters in Yellowstone, or any
>of the other national parks? Do people commonly listen to any of the
>ARRL "national calling frequencies"? Or do most people tend to leave
>the radios home (fat chance)?
>--

There is an EXCEPTIONAL 146.34/94 machine in Driggs, Idaho at about
9,000 ft. It is called the "Garns Mt. Repeater" and gets into many
of the park locations. You will need at LEAST 5 watts and a "good
stick" to hit it from inside the park. I have been able to hit it
from many locations with my 5 wt. HT and a telescopic 5/8ths.
.52 simplex is pretty active during summer months too.

Jeff Later WB7TZA jeffl@pmafire.inel.gov *"Opinions are mine, not WINCO's"

Date: 11 Apr 91 21:55:10 GMT
From: news-mail-gateway@ucsd.edu
Subject: apt freqs.
To: info-hams@ucsd.edu

From: Colin Schmutter

Date: 9 Apr 91 01:53:08 GMT
From: wang!tosspot!lee@uunet.uu.net
Subject: WEFAX APT Frequencies needed!
To: info-hams@ucsd.edu

Hi.

I'm looking for the APT frequencies for the following satellites:

Meteor 2-16
Meteor 2-17
Meteor 2-18
Meteor 2-19
Meteor 2-20
Meteor 3-2
Meteor 3-3
Fen Yung 2-3
Any of the Cosmos series

Anyone have them? I'm planning on using the R-7000 and the M-1000
decoder to see what I can get. I already have the NOAA 9-11 stuff, but
I'd like to explore any other of the 137MHz WEFAX birds.

Thanks in advance for any info, if possible please email me direct.

Lee G8LCK

THE FOLLOWING POLAR APT'S ARE CURRENTLY ACTIVE ON A REGULAR BASIS.

APT	FREQ (Mhz)
noaa 9	137.620
noaa 10	137.500
noaa 11	137,620
meteor 2-20	137.850
meteor 3-3	137.300

Meteor 2-20 appears to have problems. It is not transmitting sync or gray scale tones. The video content appears to good, however.

THE OTHER APT'S ON THE LIST ARE NOT OPERATIONAL AS FAR AS I KNOW.

Regards,
Colin Schmutter <shmc0874@BCIT.Bitnet>

COLIN SCHMUTTER <SHMC0874@BCIT.BITNET>
NETWORK TECHNICIAN, COMPUTER RESOURCES : (604) 432-8858

Date: 11 Apr 91 20:40:31 GMT
From: pa.dec.com!shlump.nac.dec.com!sousa.ltn.dec.com!sndpit.enet.dec.com!
smith@decwrl.dec.com
Subject: ATV AM/FM revisited
To: info-hams@ucsd.edu

I was reading some more random texts that someone had sent me Xeroxes of (don't ask, he found them second hand himself) and realized something that didn't come out of our previous discussions about FMTV bandwidth. If you set the deviation to a couple of MHz, then the low frequencies (sync and general brightness and such) will have a high modulation index while the high frequencies (color and small details) will have a low modulation index. [Yeah, I know, we discussed that part, but there's more]. A modulating signal with a high modulation index will produce lots of sidebands, while a signal with a low modulation index will produce few if any sidebands. This means that the low frequency signals will spread out more (though they won't get too far from the center frequency) and the high frequency signals

will produce (virtually) no sidebands at all!

Next, consider the spectrum of a _baseband_ TV signal, there's an amplitude peak at the low frequencies and another smaller one around the color burst.

Since the deviation term in the well-known $BW=2(DEV+F_{max})$ depends on the _amplitude_ of the modulating frequency, the bandwidth of the resulting ATV signal is going to vary in a complex manner:

At low frequencies (which are high amplitudes) the deviation is going to be large (and F_{max} is going to be small) giving primarily $BW=2(DEV)$, while at high frequencies (which are low amplitudes) the deviation is going to be small, giving primarily $BW=2(F_{max})$. Somewhere in the middle strange things will happen, but it seems to me that you could keep the overall 'significant bandwidth' (which is what, -20-something dB or -40-something dB?) within 6 MHz without too much trouble.

Now, maybe I haven't thought of everything, and maybe pre-emphasis will skew the results, but it still seems like we can fit FMTV in 6 MHz bandwidths, and use it in the 440, 900, and 1200 MHz bands. And yes, things may get noisy on the high end, but if the color gets strange or the fine details (what there are of them in a CCD camcorder) gets lost I'll live with it. We'll still get the usual FM advantages (capture effect, noise immunity, etc) on the low-frequency components of the signal.

I'll probably get a 900 MHz transmitter/receiver pair in the next month and play with a TV camera and spectrum analyzer and see what I can do. Worst case I won't be able to make it fit in 6 MHz so I'll use it for the B/W images in my teleoperations project. B/W has _got_ to fit, F_{max} is only around 1.5 MHz, so 1.5 MHz deviation gives 6 MHz bandwidth with $BW=2(D+F)$.

Willie Smith (N1Ixx - 5 weeks and counting!)
smith@sndpit.enet.dec.com
smith@sndpit.enet.dec.com@decwrl.dec.com
{Usenet!Backbone}!decwrl!sndpit.enet.dec.com!smith

Date: 11 Apr 91 19:00:55 GMT
From: vtserf!groupw.cns.vt.edu@uunet.uu.net
Subject: Base antennas for 2m/70cm
To: info-hams@ucsd.edu

I am looking for a low-cost 2m/70cm base antenna system for my house. There seem to be plenty of plans for 2m or 70cm verticals, but I haven't seen any plans for dual banders. It seems that a person could build two single band antennas and buy a diplexer for a reasonable cost though. Below is a diagram of an antenna that looks interesting and easy to build. The book that the diagram comes from also has a version

for 1.25m, but not one for 70cm. The antenna does not scale down exactly since the PVC pipe will still be the same size. Does anyone have plans for a 70cm version of the antenna below? plans for a good dual band? (The author claims that the antenna diagramed below works better than a 1/4 wave ground plane.)

Vertical Gain Antenna for 2meters:
(cross section view)

	c	From: All About VHF Radio
17.50in	c	By: William Orr, W6SAI
	c	Antenna by: Fred Dietrich, NM6J
	c	
	* c--*	wire mesh connected to center conductor here
17.25in	* c *	
	* c *	
	* c *	
	c	
17.50in	c	
	c	
	c	
	* C--*	wire mesh connected to shield here
17.25in	* C *	
	* C *	
	* C *	
	C	- 3/4in schedule 40 PVC
	C	C - coax feedline
	C	c - 12ga copper wire conn. to center cond.
	C	* - 3/8in mesh galvanized hardware cloth
	C	
	C	

Thanks,
Phil Benchoff

Date: 11 Apr 91 19:29:53 GMT
From: maverick.ksu.ksu.edu!matt.ksu.ksu.edu!misra@uunet.uu.net
Subject: FM-10
To: info-hams@ucsd.edu

Has anyone out there build a transmitter using the FM-10?
if so.. can we talk?? Thnaks..

Date: 11 Apr 91 18:09:07 GMT
From: usc!wuarchive!emory!ducvax.auburn.edu!eng.auburn.edu!bh@ucsd.edu

Subject: License & VEC
To: info-hams@ucsd.edu

Does the time it takes to get a licence depend on the VEC being used and if so, which VEC is faster - the ARRL or W5YI-VEC?

bH@eng.auburn.edu

Date: 11 Apr 91 23:48:14 GMT
From: news-mail-gateway@ucsd.edu
Subject: QSO with shuttle
To: info-hams@ucsd.edu

After frustating hours and days trying to receive the signal from space shuttle I thank the SAREX was a joke. No signal on 145510 or 145550. On Tuesday April 9 I received some signal from shuttle on 145590. This frequency was not published. After to know about the delayed return I tryed on April 10 once more again. To my surprise KB5AWP answered my call and we have made the QSO. He said me to have high level of QRM. This was 1803 UTC. I used a handheld Icom 02AT with the rubber antenna.

73

Fran R. F. Aragao
P T 2 T D
Department of Physics
University of Brasilia.

Date: 11 Apr 91 15:22:46 GMT
From: gatech!bloom-beacon!eru!hagbard!sunic!news.funet.fi!news@ucsd.edu
Subject: request for info on IC-W2 handie
To: info-hams@ucsd.edu

Is there anybody out there, who has been lucky to try her/his hands on the new Icom IC-W2 handie? I read a piece of news telling us that the acessories are new. Seems like the ham radio industry does the same mistakes again and again using non-standard DC plugs etc. (I remember one occasion when I tried to find a replacement plug for a TR-2200 and ended up in replacing the jack, too...and that was in the 70's!)

How is the overall performance and user friendliness? I own a '24ET and it isn't particularly sensitive to overloading (even at my job in close proximity of several local BC stations and PMR/cellular base stations) but it is also sort of deaf outside amateur frequencies.

Date: 11 Apr 91 14:51:22 GMT
From: swrinde!elroy.jpl.nasa.gov!ncar!asuvax!mcdphx!hrc!gtephx!pfluegerm@ucsd.edu
Subject: sattelite tracking
To: info-hams@ucsd.edu

In article <9104032313.AA00173@hls.com>, trop@hls.COM (Troy T. Pummill) writes:

>
> Netlanders,
>
> Does anyone have/make a satellite tracking program for the Mac SE or Mac II?
> Inquiring minds want to know....
>
> thanks and 73s.....
>
> trop (Troy)
> -----
> | Troy T. Pummill, N6XMV | trop@hls.com |

I tried to e-mail you but it bounced.

I am just finishing up development on one that works on any mac. It also does MUF plots, beam headings, and a couple other things. The program itself is mostly finished. I still have to do the documentation.

I'd be happy to email you a copy to get some user feedback before I release it. When I release it, I will post it to comp.binaries.mac. As far as email though, I can only do UUCP (no FTP or internet), so would have to send it in several chunks (it's over 100K compressed).

mike

--

Mike Pflueger @ AG Communication Systems (formerly GTE Comm. Sys.), Phoenix, AZ
UUCP: {...!ames!ncar!noao!asuvax | uunet!hrc | att}!gtephx!pfluegerm
Work: 602-582-7049 FAX: 602-582-7624 Home: 602-439-1978
Packet: WD8KPZ @ W1FJI Internet: PLEASE USE UUCP PATH (NOT INTERNET)!

Date: 11 Apr 91 20:42:53 GMT
From: world!ksr!jfw@decwrl.dec.com
Subject: TRF Receiver
To: info-hams@ucsd.edu

In <1991Apr9.220744.4049@milton.u.washington.edu> whit@milton.u.washington.edu (John Whitmore) writes:

>In article <1991Apr9.124118.27031@mlb.semi.harris.com>
rps@sunman.mlb.semi.harris.com (Ray Sumperyl) writes:
>> Can anybody supply me with a schematic for a tube TRF receiver?
> No such devices have been built by THAT name in most of a century.
>Any of the '60s vintage Radio Amateur Handbooks, though, will have 'grid-dip
>meter' construction articles, and a grid dip meter is exactly a TRF receiver
>(not terribly sensitive, though, as they usually leave out the
>preamplification). After mid-60's, the grid-dip meters used MOSFETs (what's
>a 'grid' in a MOSFET?).

Well, in fact the 1963 Radio Amateur's Handbook has schematics for
single-stage tube TRF receivers; you would just build a detector stage
(plate detector, infinite impedance detector, or grid-leak detector) and
wire the antenna to the RF input. You could then add an RF amplifier,
if you wanted, remembering not to cheat and do any conversion stages ;-).

As for no one building a TRF receiver in most of a century, check out the
Ferranti ZN414 AM Receiver chip (available from Circuit Specialists and
a couple of other places). It's a 10 transistor TRF receiver (4 amplifier
stages, detector, and AGC) built into a T0-92 transistor package; add
two resistors, two bypass capacitors, an LC tank, and an audio amp, and
you have a complete receiver.

(The 1963 Handbook also has a 110 page advertisement section that will make
you CRY -- MAYBE a quarter of the advertisers still exist)

Date: 11 Apr 91 19:26:09 GMT
From: sbi!zeuswtc!chi!jl@uunet.uu.net
Subject: TUCKER IS SOLD OUT ON THE SINGER SPECTRUM ANALYZER
To: info-hams@ucsd.edu

The subject says it all, thanks to all for your comments

--

Jean-Louis Ecochard 0
~~~~~./\_\.~~~~~  
jl@chi.sbi.com ( \_\_Y\_\_ ) uunet!sbi!chi!jl

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Date: 11 Apr 91 12:56:06 GMT  
From: swrinde!zaphod.mps.ohio-state.edu!wuarchive!emory!wa4mei!ke4zv!gary@ucsd.edu  
To: info-hams@ucsd.edu

References <1991Apr3.201909.22363@grian.cps.altadena.ca.us>, <2692@ke4zv.UUCP>,  
<1991Apr8.034000.9407@ux1.cso.uiuc.edu>

Reply-To : gary@ke4zv.UUCP (Gary Coffman)  
Subject : Re: frequency standards

In article <1991Apr8.034000.9407@ux1.cso.uiuc.edu> phil@ux1.cso.uiuc.edu (Phil Howard KA9WGN) writes:

>gary@ke4zv.UUCP (Gary Coffman) writes:

>

>>Note that if you want to use the color subcarrier of a broadcast signal  
>>as a reference, you must be very careful to only sample the subcarrier  
>>during burst interval. The subcarrier is FM modulated to transmit hue  
>>information and AM modulated to transmit color saturation information.  
>>Only the burst is held to a constant amplitude and phase.

>

>I would beg to differ. It is QUADRATURE modulated. There is no  
>ACCUMULATED phase or frequency shift. With a narrow enough filter  
>all the intermittent effects of the modulation can be eliminated.

If you can build a narrow enough filter, you don't need to use the color subcarrier as a reference. You can use the filter directly. The problem is that the modulation generates phase shifts of the same order of magnitude as the tolerance of your frequency standard. Phase and frequency are the left and right hands of the same thing. Sure the long term average frequency of the subcarrier is constant, as they are in any FM modulation scheme, but the short term variations must be considered when using it as a reference.

>The net EFFECT of the way NTSC modulates the color subcarrier will appear  
>to be an AM envelope of saturation and a PHASE vector for the hue. But  
>it is actually specified in the standard in terms of a pair of composite  
>signals called I and Q which are constructed by a formula I don't have  
>at hand. The two signals are modulated with carriers that are 90 degrees  
>apart in phase.

It's the effect that counts when you are attempting to use the frequency as a reference.

Gary KE4ZV

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Date: (null)

From: (null)

Honestly, the only reason for me to buy a new handie is to get simultaneous receiving on both bands because scanning really does exhaust the battery (especially the small one) very fast. Is it really worth the trouble, although I managed to get a reasonable bargain at the dealer?

73 de Benjamin OH3BK (replies directly or to rec.radio.amateur.misc, pse)

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Date: 10 Apr 91 19:21:01 GMT  
From: milton!sumax!polari!mzenier@beaver.cs.washington.edu  
To: info-hams@ucsd.edu

References <1991Apr9.124118.27031@mlb.semi.harris.com>,  
<1991Apr9.220744.4049@milton.u.washington.edu>, <31586@ucsd.Edu>  
Subject : Re: TRF Receiver

In article <31586@ucsd.Edu> brian@ucsd.Edu (Brian Kantor) writes:  
>In article <1991Apr9.220744.4049@milton.u.washington.edu>  
whit@milton.u.washington.edu (John Whitmore) writes:  
>> No such devices have been built by THAT name in most of  
>>a century.  
>  
>I beg to differ, grasshopper. I built a TRF in junior high school, the  
>Philco and Atwater-Kent radios were TRFs for a while, and even old  
>grandpop built them when he was working for Lee DeForest - out of  
>triode valves he built himself, yessindeed.  
>  
>Half a century, maybe. This isn't 2030 yet, not by a long row of trees.

A friend is a US Navy surplus buff. He's got a garage full of stuff  
including a couple of LF receivers that are TRF. He said they built  
them up until around 1968.

All sorts of neat circuitry tricks like using coupling transformers with  
a winding with a resistor (switchable) to set the Q and thus the bandwidth.

He says they have a dynamic range you can't get these days, but you're  
talking about some serious boat anchors that cost the government thousands  
of dollars new.

I'd suppose an outfit like Fair Radio might have the books on something  
like this.

Mark Zenier markz@ssc.uucp mzenier@polari.uucp

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End of Info-Hams Digest  
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